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A
Practical Essay
on
Saunders,
respectfully submitted to the
Dean and Faculty of the University
of Pennsylvania, by Wm Gates
of
Charleston South Carolina
for the
Degree of M.D.

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1 Jaundice.

Jaundice is one of the diseases most commonly to be met with among men engaged in the pursuit of literature, and among persons who from the nature of their daily avocations lead sedentary and inactive lives. The drunkard too is frequently the victim of its visitation, and by him it is most to be dreaded, as in him it is often induced by hepatic tumour, or some organic disease of the adjacent viscera, which is the most unfavourable kind. Nor is it confined to either sex, though it occurs most frequently among women, and oftener among adults than children. It is supposed by some writers that persons of a lithic diathesis are predisposed to this disease. The excessive heat of tropical climates by the influence it professes over the liver in increasing and irritating its secretions do no doubt dispose to it likewise.

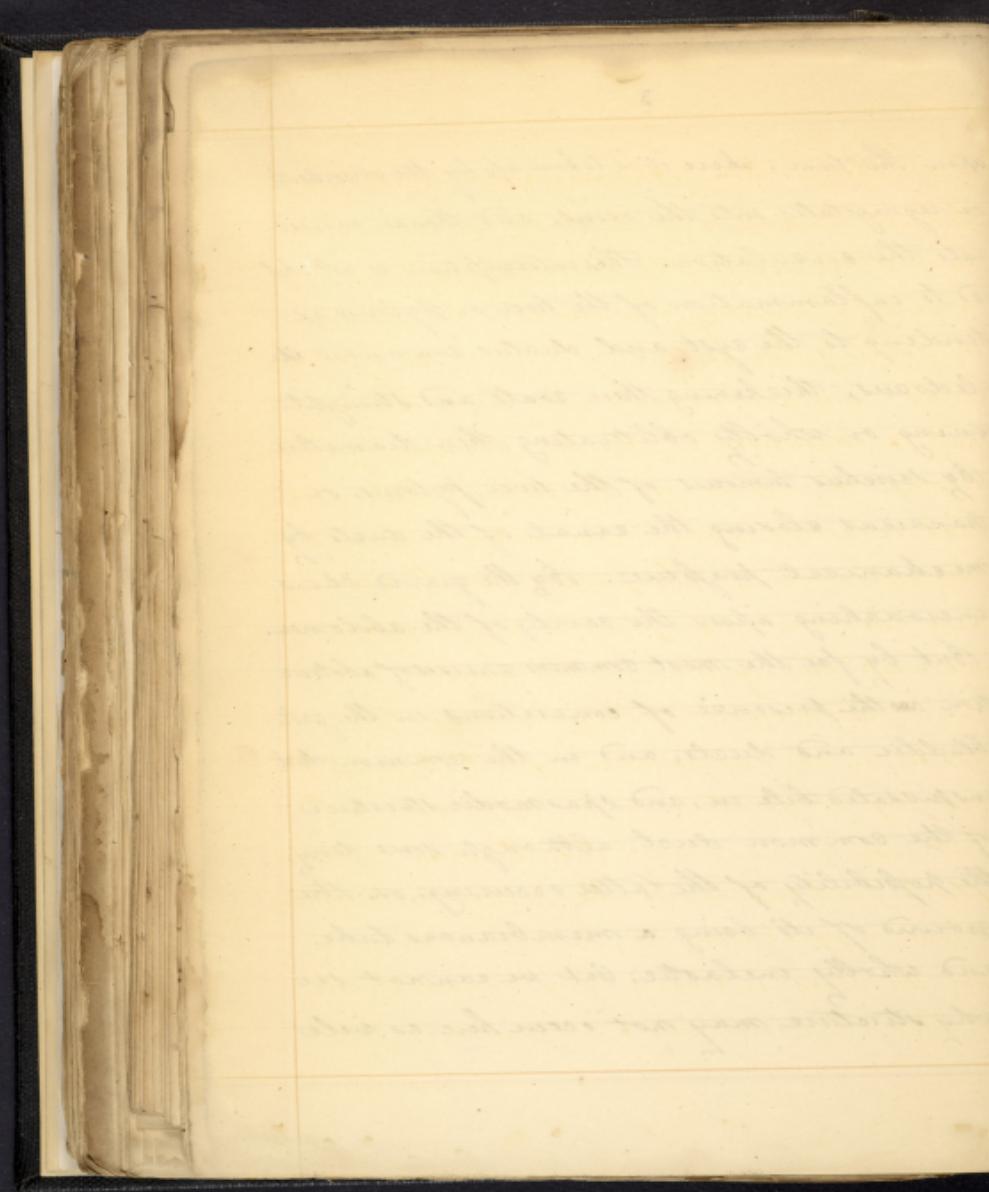
Jaundice is characterised by a yellowing of the skin over the whole body, and of the adnata of the eyes, by red urine which tinges linen yellow, by white or grey clayey stools, and constipated bowels.

This disease is induced by an absorption of bile into the circulation, which passes into the minutest vessels, and pervades every portion of the body, giving rise to the yellowness above mentioned, which is most remarkable about the roots of the nails, and the external coat of the eyes. This is caused either by an increased secretion of bile too great to be conveyed away by the ordinary channel of the pori biliaria into the hepatic duct, and from thence through the common duct into the duodenum, which they are fully capable of doing under ordinary circumstances; or by obstructions of the ductus communis choledochus: in both of which cases the bile is thrown back

upon the liver, where it is taken up by the absorbents, or regurgitates into the veins, and thence carried into the circulation. This interruption is attributed to inflammation of the liver or pylorus extending to the cyst and ductus communis the oledocus, thickening their coats and straightening or wholly obliterating their diameters.

By scirrhous tumours of the liver, pylorus, or pancreas closing the canal of the ducts by mechanical pressure. By the gravelous tumours encroaching upon the cavity of the abdomen.

But by far the most common causes of obstruction are the presence of concretions in the gall-bladder and ducts, and in the common duct; inspissated bile in, and spasmodic stricture of the common duct; although some deny the possibility of the latter occurring, on the ground of its being a membranous tube and wholly inelastic; but we cannot see why stricture may not occur here as well.



as in the urethra. And may not concretions in the gall-bladder and duct by irritation produce stricture in the choledochus?

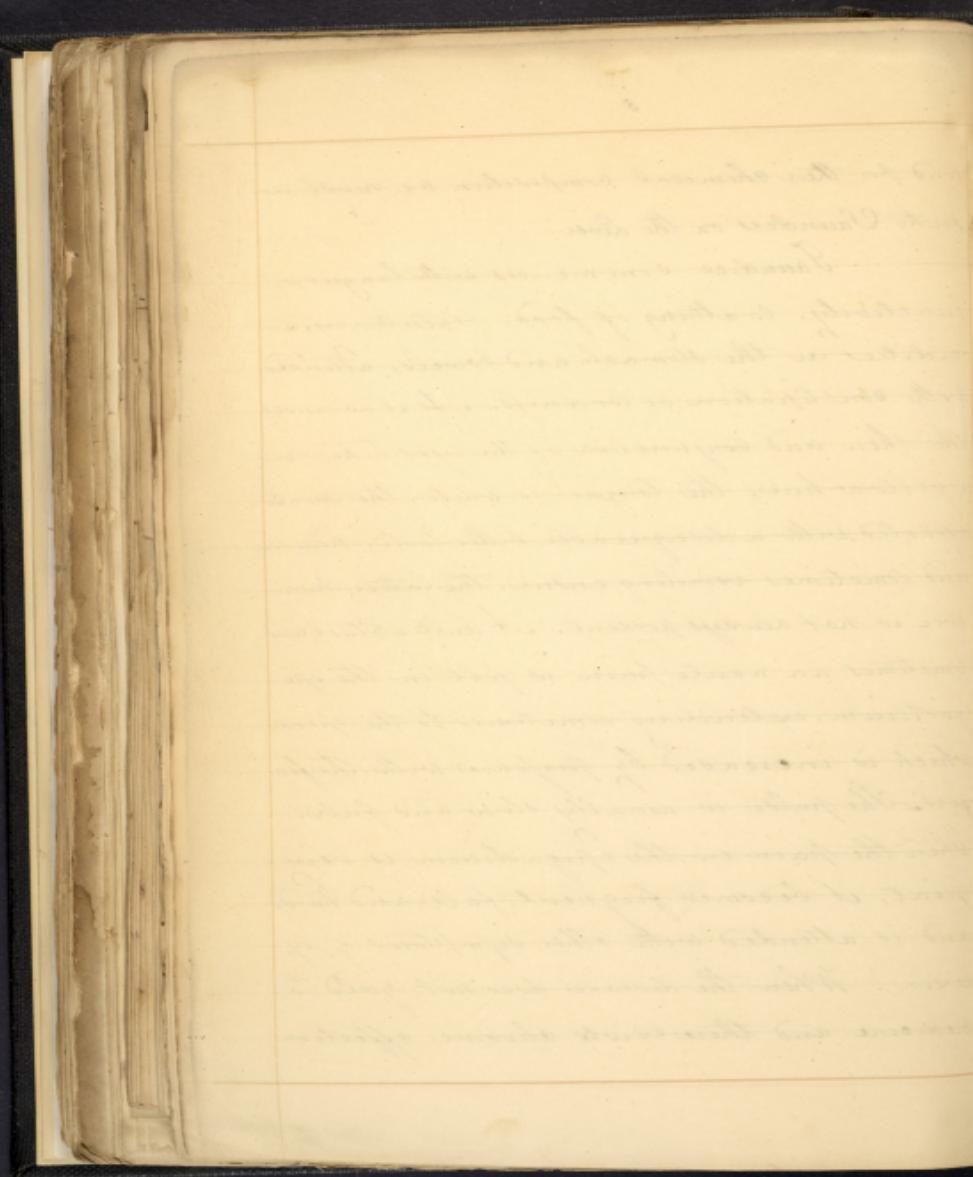
Excessive vomiting has induced the disease by forcing the gall stone out of the cyst where it had remained inert, into the common canal. Substances in the duodenum by blocking up the orifice of the duct as it penetrates that intestine have been known to bring on this affection. The peccoms of the mind, and the abuse of spirituous liquors are enumerated among the exciting causes.

The formation of gall-stones is accounted for on the supposition of irritation of the bile, of stagnation and inspissation; the absorbents removing the thinner and more fluid portions leave the grosser parts behind which aggregating form calculi.

For the sizes and variety of appearances of biliary calculi, see Alzagni's large work

and for their chemical composition we must refer to Saunders on the Liver.

Jaundice commences with languor, inactivity, loathing of food, flatulency, acidities in the stomach and bowels, attended with constipation or looseness. As it advances the skin and conjunctiva of the eyes take on a yellow hue, the tongue is white, the mouth affected with a disagreeable bitter taste, nausea and sometimes vomiting ensue, the latter however is not always present. A dull obtuse and sometimes an acute pain is felt in the epigastrium extending sometimes to the spine, which is increased by pressure with the fingers. The pulse is usually slow and full. When the pain in the epigastrium is very great, it becomes frequent, fall and hard, and is attended with other symptoms of pyrexia. When the disease does not yield to medicine and there exists chronic affection



of the liver, a neighbouring vesica, anaemia
and sometimes ascites are apt to appear.

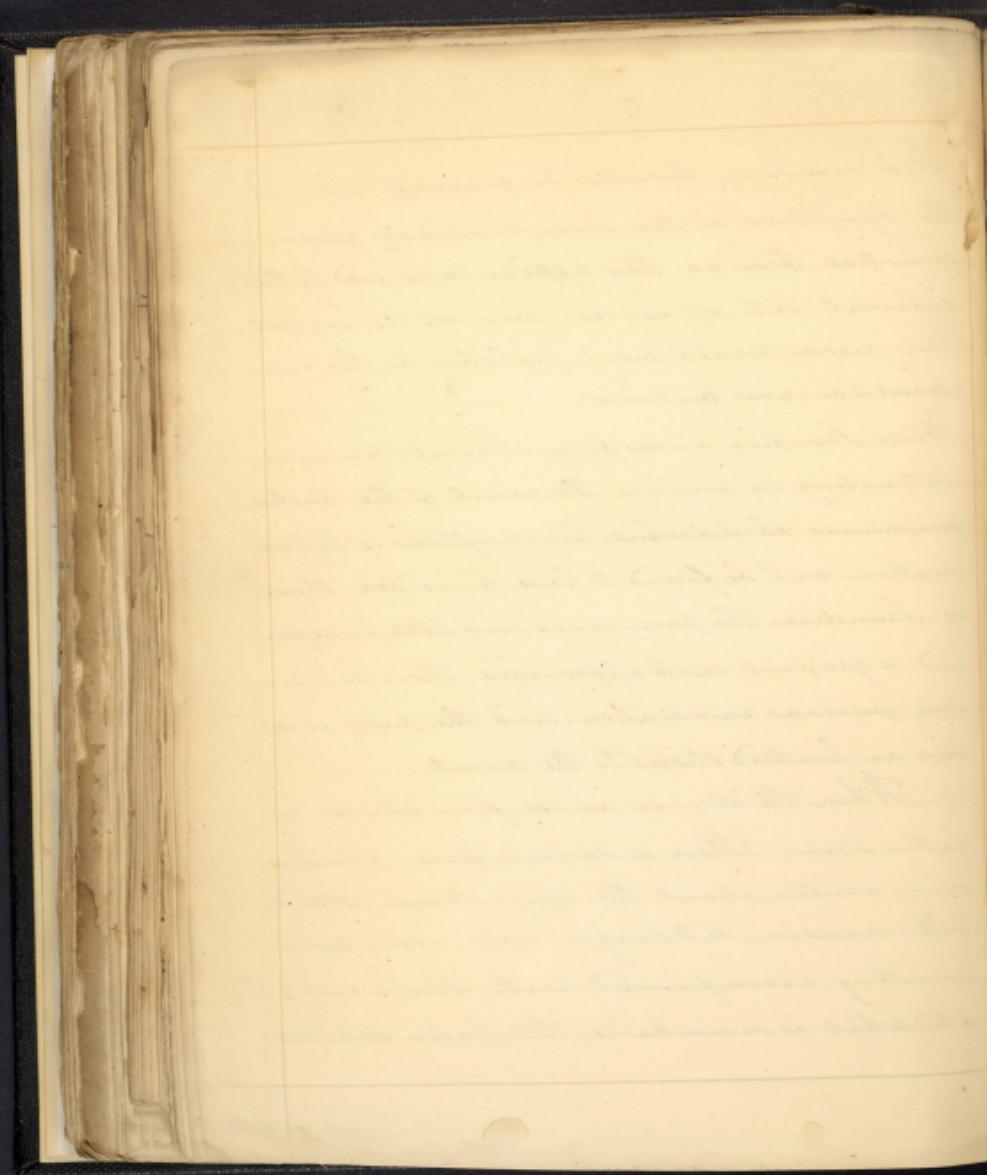
Petechiae and maculae are occasionally found
on different parts of the body. The skin as-
sumes a deep golden colour, or a brown, or
mottled appearance, and is exceedingly
irritable. At this period of the disease there
exists a great degree of torpor, followed by
low muttering delirium, with picking
at the bed clothes. The pulse becomes
slower and more feeble, and a great dis-
position to hemorrhagy prevails, even to
such a degree that blood often flows from
the mouth, nose and anus. In this state
the patient when roused will take food,
but he still continues to sink, and passes
among the bed clothes dark fluid evacu-
ations. A troublesome kickapoo comes
on and convulsions and death soon en-
- sue --.

inventare a lui stesso, come che
della sua Diversa, e la scuola di credere
che la sua vita non ha avuto
che un solo obiettivo, e che questo obiettivo
è stato di far credere che

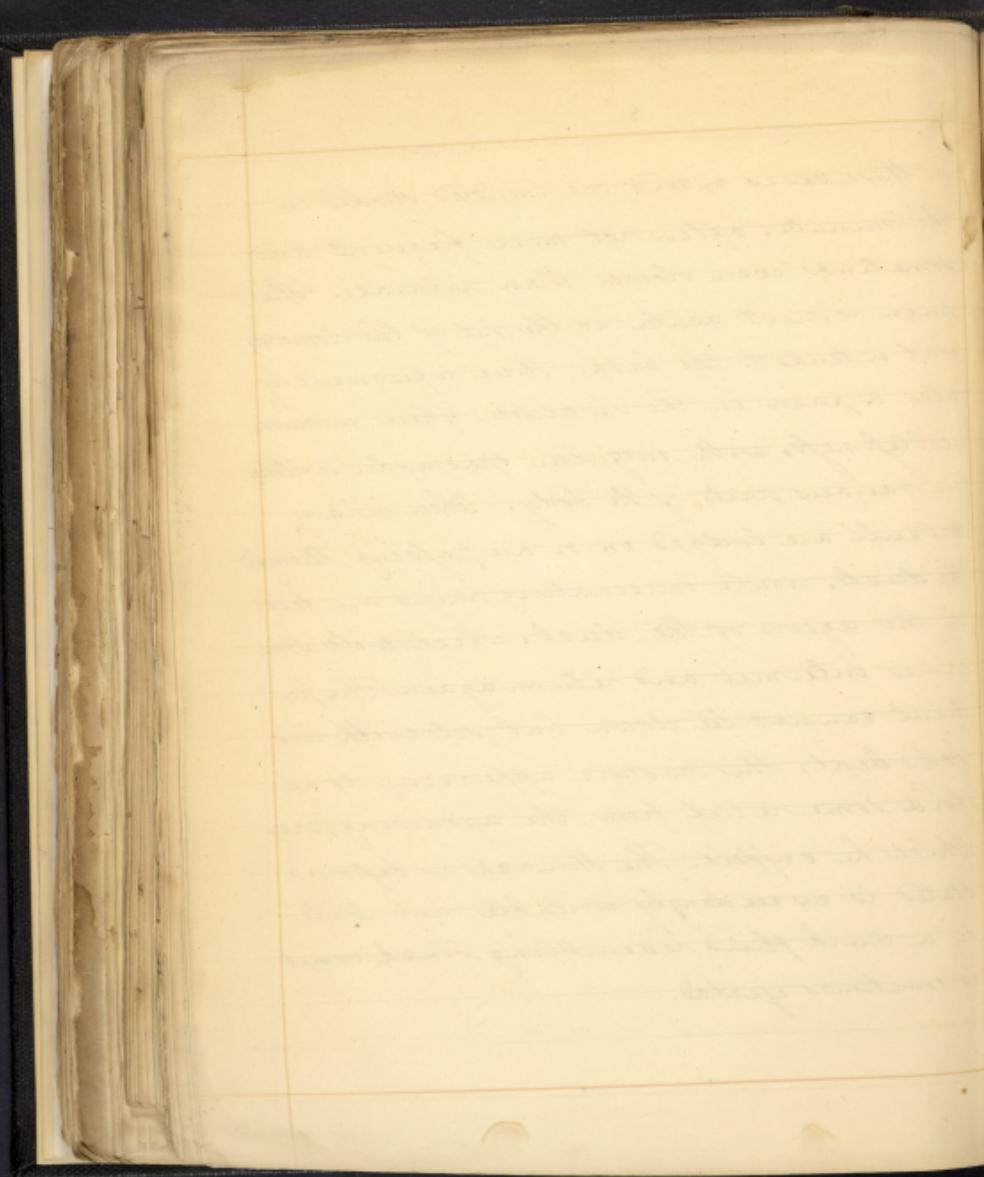
It is necessary, besides the general view of the symptoms of this disease already given, to notice them as they appear modified by the different sets of causes: were we to neglect this, error would most probably be the consequence in our treatment.

When Jaundice arises from visceral tumours obstructing by pressure the canal of the ductus communis choledochus, the symptoms of inflammation will be found to have preceded those of Jaundice. The pain varies very little in degree, and is gradual in its approach. There is also some previous emaciation, and the pulse is above an hundred strokes to the minute.

When the disease arises from spasms or gall-stones. There is sudden pain, which is very acute, about the epigastrium attended with nausea, retchings, and sometimes vomiting accompanied with shivering, and what is remarkable, the pulse does not



in these cases exceed one hundred strokes in the minute, often not more frequent and sometimes even slower than natural. The pain is most acute at the pit of the stomach but extends to the back. There is frequently also a pain in the shoulder. There is much restlessness, with irregular spasmodic twitches in various parts of the body. When biliary calculi are lodged in or are passing through the duct, acute lancinating pains are felt in the region of the duct, which will sometimes intermit and return again. The patient cannot lie down but sits with his body bent, this posture appearing to afford some relief from the agonising pain which he suffers. The stomach as before stated is exceedingly irritable, and bile or a dark fluid resembling black vomit is sometimes ejected.



When Jaundice arises from visceral tumours obstructing the ducts, as it implies, chronic affection of those organs, from the known obstinacy of such affections we can expect but little success from the best conducted plan of treatment.

When it arises from gall-stones obstructing the Choledochus communis, or when from spasmodic stricture of the canes, where they have not existed very long, and the constitution of the patient is not much impaired, our medicines may effect a favourable termination of the complaint.

When it arises during pregnancy, parturition by removing the cause, will most generally put a stop to the disease also.

When it is produced by excessive secretion, gentle evacuants by removing the bile from the duodenum through the alimentary canals, and the mild tonics, by invigorating

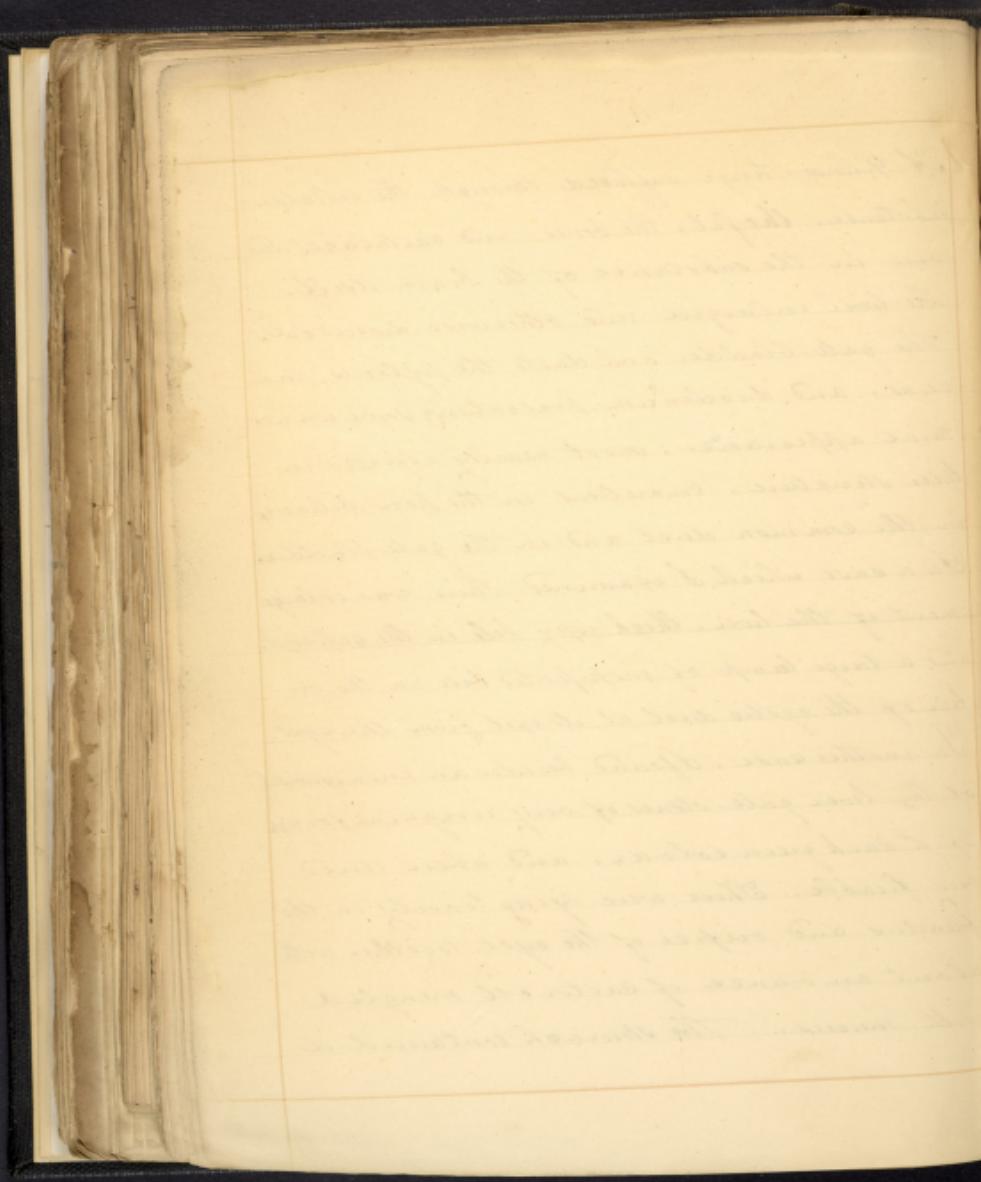
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the general system and restoring the healthy action of the liver will cause the complaint to disappear. When the uneasiness at the pectora gradually abates, and the appetite, strength, and digestive powers return, and we can easily procure large stools and copious urinary discharges free from bile and of a natural colour, especially if the subject be young and of vigorous habit, and the disease has come on suddenly, we may hope for a speedy recovery. But should the pain in the epigastrium be violent, attended with a quicke pulse, loss of strength and flesh, with anaæsiaous swelling of the extremities, and should there be present, dulness, watchfulness, chilliness and melancholy, accompanied with kick-up and profuse sweat or hemorrhage, it is likely to terminate in confirmed asites or death.

Post mortem examinations exhibit.

A yellow tinge suffused through the cellular substance, the fat, the bones and cartilages and even in the substance of the brain itself.

The liver enlarged and otherwise diseased. The gall-bladder and duct, the pylorus, pancreas, and duodenum presenting some unnatural appearance; most usually affected in their structure. Concretions in the ¹⁷ peri-biliary in the common duct and in the gall-bladder. In a case which I examined. There was enlargement of the liver, thickropy bile in the gall-cyst, and a large lump of insipitated bile in the orifice of the cystic duct at its exit from the cyst. In another case, I found besides an enlargement of the liver gall-stones of very irregular forms of a dark green colour, and when dried very friable. These were lying loosely in the fundus and orifice of the cyst, together with about an ounce of castor oil mingled with mucus. The stomach contained a



similar fluid, which the patient had swallowed a few hours previous to his dissolution.

As Jaundice is more or less connected with or dependant upon some morbid state of the liver; when first called to a patient labouring under this affection, we should always direct our attention to this viscus, to ascertain if possible what may be its real condition.

This is the more necessary as our treatment is medicated upon it.

The cure is to be attempted. First by restoring the interrupted passage of the bile into the duodenum and gall-bladder. Secondly by conveying it through the intestines out of the body. And thirdly by palliating symptoms as they may arise.

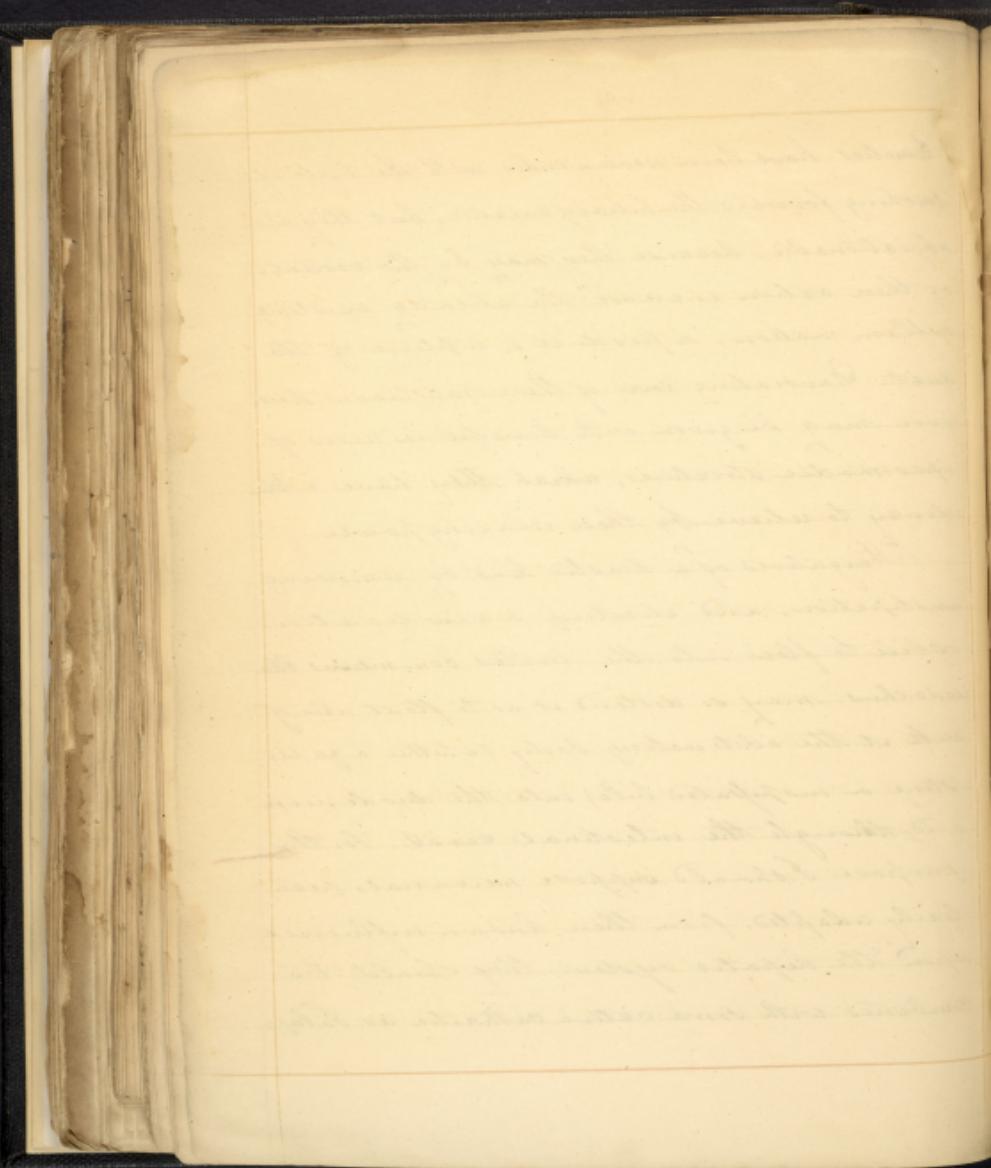
Whether the disease originate from biliary calculi, or spasmodic stricture interrupting the passage of the bile through the ducts, nearly the same plan of treatment may be

adopted. Large concretions distending the ducts very much, whilst lodging in or passing through them not only excite great pain but frequently also a great degree of inflammation. In this case there is generally much fever. To alleviate this we must resort to copious venesection if the patient can bear it, in this the pulse, strength, and degree of pain which he suffers must direct us. He is next to be put into a warm bath until some relaxation is produced. He is then to be conveyed to bed, and an opiate given him; which may be repeated every four or six hours until ease be procured: it should be given in the pills form, as fluids by this bulk are apt to excite an irritable stomach to reject them. We may apply at the same time warm fomentations to the seat of pain such as flannel cloths wrung out of warm spirits Be; and as an auxiliary emollient oysters may be administered.

and the various nations right and
left, went together in large numbers
to the church of St. Peter, where they
met and heard the sermon of the
Bishop of Salzburg, who had
been sent to the church to preach
and to exhort the people to
make a good confession before
the day of judgment. The Bishop
said, that the people had
done well to come to the church
and to do their duty, and that
they had done well to confess
their sins, and that they had
done well to do their duty
and to do their duty.

Sometimes have been recommended with the view of pushing forward the biliary calculi, but they are objectionable; because they may by the violence of their action increase the already existing inflammation, or produce a rupture of the duct. Purseating doses of these substances however may be given with benefit in cases of spasmodic stricture, which they have a tendency to relieve by their relaxing power.

Purgatives of a drastic kind by removing constipation, and eliciting a new secretion of bile to flow into the ductus communis choledochus, may so distend it as to float along with it the obstructing body. (whether a gall-stone or insipitated bile) into the duodenum and through the intestinal canal. For this purpose I should suppose mercurials usually adapted, from their known influence upon the hepatic system; they should be combined with some active cathartic as Salap



scammony &c. When Jaundice arises from some chronic affection of the liver or adjacent viscera, active purgatives might prove injurious by inducing too great debility. In such instances gentle aperients to keep the bowels soluble, and calomel administered, in small doses, so as gradually to induce its altentant impaction, will perhaps be found as serviceable as any thing we can do. Exercise on horseback during the intermission of the paroxysms are recommended. Electrical shocks through the region of the liver have been attended with success.

If Jaundice should arise from a acute inflammation of the liver, general and topical bleeding, saline purgatives, and blisters applied over the region of this viscera, are the most likely means of affording relief. If the inflammation become chronic mercurials are indicated.

To relieve the distressing symptoms which occur in the disease, viz: the epigastric pain and

irritability of the stomach; venesection, or the warm bath if the patient's strength will admit of them, opium in pills, or 5pts of laudanum in doses of thirty or forty drops frequently repeated as the case may seem to require, or lastly a blister large enough to cover the greater part of the abdomen will be found very serviceable.

When the disease is attended with anaemia diuretics are advised. As the disposition to dropy here is the consequence of general debility, the system calls for the aid of bitters, chalybiates, mineral waters, a nutritive diet and moderate exercise to support it.

A spontaneous diarrhoea sometimes occurs, and marks a crisis in the disease; which is not to be checked suddenly unless it induces too great debility, when it may be accomplished by the usual means, viz extacuous mix-

tonics, opiates &c.

There is a variety of Jaundice consequent upon the Yellow Fever. When this dreadful malady quits its victim, driven out by powerful medicines, or the salutary efforts of the system, or by the conjoint influence of both forces; he is left in a state of great prostration. It is in this state that Jaundice appears, with no acute symptoms. A gradual yellowation of the skin takes place, which after awhile becomes of a deep yellow hue, the conjunctiva are affected in like manner as in the other forms of the disease; and the patient complains of nothing but weakness. It requires no active remedies. The mild tonics answering very beneficial purpose. The yellowness diminishes as the patient's strength returns.

A number of the successful cases of Yellow Fever which were admitted into the Charleston Poorhouse the last summer terminated in

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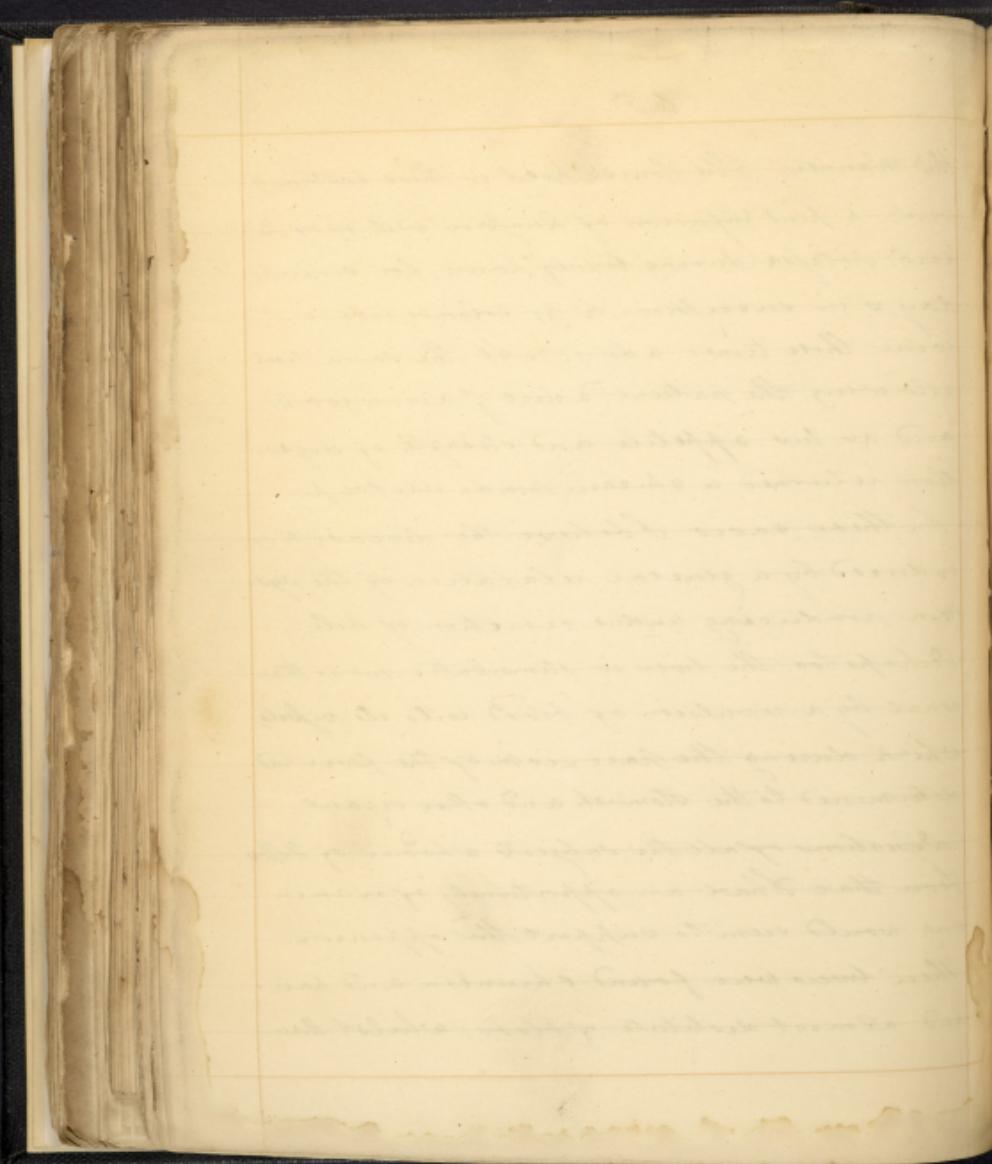
this manner. The tonics used in these instances were a pint infusion of Quinine with $\frac{3}{4}$ of the said Root for during twenty hours, for several days in succession, a $\frac{3}{4}$ Colombo root in wine three times a day; at the same time allowing the patient a diet of arrow root, and as his appetite and strength of digestion returned a chicken made into soup.

In these cases I believe the disease was induced by a general relaxation of the system producing undue secretion of bile.

Perhaps too the liver is stimulated more than usual by a revulsion of blood into its vessels, which during the paroxysm of the fever had determined to the Stomach and other organs.

Dissections of all the subjects who died of Yellow Fever that I had an opportunity of examining would seem to support this opinion.

Their livers were found shrunken and pale and almost destitute of blood; whilst their



Stomachs were highly injected, and the ovens
on its surfaces very much enlarged. Their
lungs engorged and the ventricles of the
brain containing a cereus fluid, and some car-
blood-
blines.

December 1824

